

# BEST AVAILABLE COPY

HOI-14402 ST25.txt SEQUENCE LISTING

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Sorensen, Anders Per
Benfield, Thomas Lars
Lundgren, Jens Dilling
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        Kempe, Thomas
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       PA 2003 01044
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# BEST AVAILABLE COPY

#### HOI-14402 ST25.txt

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Ser Trp Ser 35	Trp Ile	Arg Gli	1 Thr 40	Pro	Gly	Lys	Gly	Leu 45	Glu	Trp	Ile	
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gaa gat ttt gca gtt tat tac tgt cag cag cgt agc aac tgg cct ctc Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Leu 85 90 95	288
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50 55 60
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Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
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tat gat gca tcc aac agg gcc act ggc atc cca gcc agg ttc agt ggc Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly 50 55 60	192
agt ggg tct ggg aca gac ttc act ctc acc atc agc agc cta gag cct Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro 65 70 75 80	240
gaa gat ttt gca gtt tat tac tgt cag cag cgt agc aac tgg cct cca Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Pro 85 90 95	288
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Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly 50 60	
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro 65 70 75 80	
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gcg Ala	agg Arg	gat Asp	cgt Arg 100	att Ile	aca Thr	atg Met	gtt Val	cgg Arg 105	ccc Pro	tat Tyr	tac Tyr	tac Tyr	ttc Phe 110	tac Tyr	aac Asn	336
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gac cca cac gaa tac gaa cca ctt cct gaa gac gtt aag aaa act tct 240 Asp Pro His Glu Tyr Glu Pro Leu Pro Glu Asp Val Lys Lys Thr Ser 65 70 75 80
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aat gct tgg ttt aca aaa ttg gta gaa aat gcc aag aaa act gaa aac 336 Asn Ala Trp Phe Thr Lys Leu Val Glu Asn Ala Lys Lys Thr Glu Asn 100 105 110
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ggt caa aat gaa aaa gga aaa gac cca cac gct tgg ctt aac ctt 432 Gly Gln Asn Glu Lys Gly Lys Glu Asp Pro His Ala Trp Leu Asn Leu 130 135 140
gaa aac ggt att att ttt gct aaa aat atc gcc aaa caa ttg agc gcc 480 Glu Asn Gly Ile Ile Phe Ala Lys Asn Ile Ala Lys Gln Leu Ser Ala 145 150 155 160
aaa gac cct aac aat aaa gaa ttc tat gaa aaa aat ctc aaa gaa tat 528 Lys Asp Pro Asn Asn Lys Glu Phe Tyr Glu Lys Asn Leu Lys Glu Tyr 165 170 175
act gat aag tta gac aaa ctt gat aaa gaa agt aag gat aaa ttt aat 576 Page 19

IIII ASP LY	s Leu 180	Asp	Lys	Leu	Asp	HO] Lys 185	(-144 Glu	102 S Ser	ST25 Lys	.txt Asp	Lys 190	Phe	Asn	
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atc aat ac Ile Asn Th 225	t gaa r Glu	gaa Glu	gaa Glu 230	gga Gly	act Thr	cct Pro	gaa Glu	caa Gln 235	atc Ile	aag Lys	acc Thr	ttg Leu	gtt Val 240	720
gaa aaa ct Glu Lys Le	t cgc u Arg	caa Gln 245	aca Thr	aaa Lys	gtt Val	cca Pro	tca Ser 250	ctc Leu	ttt Phe	gta Val	gaa Glu	tca Ser 255	agt Ser	768
gtg gat ga Val Asp As	c cgt p Arg 260	cca Pro	atg Met	aaa Lys	act Thr	gtt Val 265	tct Ser	caa Gln	gac Asp	aca Thr	aac Asn 270	atc Ile	cca Pro	816
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ggc gac ag Gly Asp Se 290	c tac r Tyr	tac Tyr	agc Ser	atg Met 295	atg Met	aaa Lys	tac Tyr	aac Asn	ctt Leu 300	gac Asp	aag Lys	att Ile	gct Ala	912
gaa gga tt Glu Gly Le 305	g gca u Ala	aaa Lys	taa											930
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<pre>Glu Gly Le 305  &lt;210&gt; 50 &lt;211&gt; 309 &lt;212&gt; PRT &lt;213&gt; Str &lt;400&gt; 50</pre>	u Ala eptoco s Leu	Lys occus Gly 5	5 pne Thr	Leu	Leu		10					15		930
<pre>Glu Gly Le 305  &lt;210&gt; 50 &lt;211&gt; 309 &lt;212&gt; PRT &lt;213&gt; Str &lt;400&gt; 50  Met Lys Ly 1</pre>	eptoco s Leu a Cys 20	Gly 5	Thr Ser	Leu Gly	Leu Lys	Lys 25	10 Asp	Thr	Thr	Ser	G] <i>y</i> 30	Gln	Lys	930
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HOI-14402 ST25.txt
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Asn Ala Trp Phe Thr Lys Leu Val Glu Asn Ala Lys Lys Thr Glu Asn 100 105 110

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Gly Gln Asn Glu Lys Gly Lys Glu Asp Pro His Ala Trp Leu Asn Leu 130 135 140

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Ile Asn Thr Glu Glu Glu Gly Thr Pro Glu Gln Ile Lys Thr Leu Val 225 230 235 240

Glu Lys Leu Arg Gln Thr Lys Val Pro Ser Leu Phe Val Glu Ser Ser 245 250 255

Val Asp Asp Arg Pro Met Lys Thr Val Ser Gln Asp Thr Asn Ile Pro 260 265 270

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Page 22

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<220> <221> CDS <222> (1)(930) <223> equence of Streptococcus pneumoniae surface adhesin A (PsaA)
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cta aaa gtt gtt gct aca aac tca atc atc gct gat att act aaa aat Leu Lys Val Val Ala Thr Asn Ser Ile Ile Ala Asp Ile Thr Lys Asn 35 40 45
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gag gct gat ttg att ttc tat aac ggt atc aac ctt gaa aca ggt ggc Glu Ala Asp Leu Ile Phe Tyr Asn Gly Ile Asn Leu Glu Thr Gly Gly 85 90 95
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act gat aag tta gac aaa ctt gat aaa gaa agt aag gat aaa ttt aat 576 Page 23

Thr	Asp	Lys	Leu 180	Asp	Lys	Leu	Asp			402 : Ser			Lys 190	Phe	Asn		
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			gca Ala		taa	gaca	agat	ttg (	tgaa	aggat	tt gg	gcaaa	aataa	a		1	960
ĞΪy	Ğ1y 	Leu 56 309 PRT		Lys				ttg (	tgaa	aggat	tt gg	gcaaa	aataa	a			960
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